

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/904,086	07/12/01	PETER	T 142-96 DIV (

MICHAEL E. CARMEN, ESQ.  
DILWORTH & BARRESE, LLP  
333 EARLE OVINGTON BLVD.  
UNIONDALE NY 11553

IM22/1016

EXAMINER
SERGENT, R

ART UNIT	PAPER NUMBER
1711	3

DATE MAILED: 10/16/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/904,086</b>	Applicant(s) <b>Peter et al.</b>
	Examiner <b>Rabon Sergent</b>	Art Unit <b>1711</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on \_\_\_\_\_

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 1-16 \_\_\_\_\_ is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-16 \_\_\_\_\_ is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

15)  Notice of References Cited (PTO-892)      18)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16)  Notice of Draftsperson's Patent Drawing Review PTO-948)      19)  Notice of Informal Patent Application (PTO-152)

17)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 1      20)  Other: \_\_\_\_\_

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1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78).

2. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to clearly define exactly what is meant by the language, “substantially linear isocyanate-terminated polyurethane prepolymer”.

3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how “substantially” is to modify “linear”.

Furthermore, the use of “about” within the language, “less than about 250”, renders the claims indefinite, because “about” encompasses values of slightly above 250; therefore, it is unclear if the language actually encompasses values of 250 or slight above.

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4. Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word, "thin", is a subjective term. It is unclear what range of thickness is denoted by "thin".

5. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how "tetramethylene ether glycol" differs from "polytetramethylene ether glycol".

6. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Resorcinol has been spelled incorrectly.

7. It is questioned if claim 11 allows for no diamine being present when the specified quantity is 100 percent.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki et al. ('623) or Koyama et al. ('399), each in view of Gajewski ('689 or '806) or Kulp et al. ('488) or Ruprecht et al.

The primary references disclose the coating of flexible substrates with linear polyurethane prepolymers, which are cured with chain extenders, such as diols and diamines.

10. The primary references fail to disclose the use of a rotational casting method; however, such methods were known to be useful for casting polyurethanes, having relatively rapid or controlled reaction profiles. This position is supported by the teachings of the secondary references. The position is taken that it would have been obvious to select a rotational casting process from the known field of polyurethane casting techniques, so as to arrive at the claimed method.

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11. Furthermore, while the primary references fail to specifically recite the use of a secondary aliphatic amine with a diol chain extender to cure the prepolymer, patentees do disclose secondary amine chain extenders, such as piperazine. Since it has long been known that cure or reaction profiles of polyurethanes can be controlled based on the reactivity of the chain extender, the position is taken that it would have been obvious to tailor the reaction profiles, depending on the requirements of the rotational casting process, by using blends of curing agents, including the disclosed diols and secondary amines, so as to arrive at the instant invention. Furthermore, it would have been obvious to select foams as being suitable substrates for the production of the composites, since the application of coverings or skins to foams has long been known in the art.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.

*Rabon Sergent*  
**RABON SERGENT**  
**PRIMARY EXAMINER**

R. Sergent/om  
September 26, 2001